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 **The Subscribers to the Southern Agriculturist are reminded, that the Price of the Journal was reduced to \$3 to all those who paid in advance; those who are still in arrears for this and former years are respectfully solicited to make their payments.**

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### Terms of the Southern Agriculturist.

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# The Southern Agriculturist.

(NEW SERIES.)

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Vol. V.

FOR JUNE, 1845.

No. 6.

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For the Southern Agriculturist.

## SUGGESTIONS FOR SOUTHERN PLANTERS.

THE present is the darkest day of our agriculture. We have all been reared up under the *cotton regime*. Suddenly its power and vitality are gone, and we are prostrate. The pivot of all our movements—the fulcrum on which rested all our hopes, are struck from us, and despair and ruin look us right in the face. In our confusion, darkness and hopelessness, a multitude of schemes for our salvation are proposed. A combination to reduce the cotton crop is loudly called for—this is plainly impracticable. All will not agree; and if all agreed, not one would feel safe in trusting his neighbor, much less his competitor a thousand miles off. Immigration is a remedy some propose; this is a doubtful one, at least partial, since few can or will adopt it; and so far as it goes destroys instead of renovating our region. A prominent suggestion is to embark in manufactures. It is an American fallacy, that all men are born not only equal but like Minerva full grown, armed and prepared for every thing. We think with Dogberry, that learning comes by nature. The truth is quite the reverse—and when it is proposed to regenerate a full grown cotton planter and convert him into a manufacturer, for one I feel like putting the question of Nicodemus, “how can a man enter into his mother’s womb and be born again?” But we may employ agents. How? sell our negroes, give away our lands, and place our all (for all would be but little compared with the requisitions of factories on a profitable scale,) into the hands of strangers to be invested in a business about which we know nothing, and cannot hope to learn much before it may be too late? We have some experience in these matters—vide the early history of Vacluse and Saluda Factories, and many others that might be named. Let speculators speculate in manufactories. “*Ne sutor ultra crepidam,*”



though a pagan maxim, is a wise one. If the cotton planter is to work out his own salvation and redeem his country, it must be in his own line of business. This may be taken for granted. He is a child of the sod, reared upon the sod, and he must live or perish on it. All shifts are vain. It is only making bad worse, to rush into radical changes "and fly from present ills to others that we know not of." Having made up our minds to hold on to our native soil, to the occupation we have been trained to, and to baptize ourselves anew in "the sweat of the brow," let us look around and see what can be done.

The first thing that strikes us is, that we have been under a *cotton growing delusion*, and sacrificed every thing to it. When our soils was fresh and cotton high, we abandoned all other culture, and purchased with our cotton a vast deal that we might have made or grown ourselves. It is, however, folly to quarrel with the past: nor do I think our quarrel just. Why might not the cotton planter buy every thing, even to his corn and butter, as well as the *cotton manufacturer*, if he found it to his advantage to plant cotton exclusively? And for a time such was the case. Our errors were in carrying on this system too long, and in exhausting our soil too far. These we must retrieve: not violently or suddenly, by radical revolutions, or slight-of-hand contrivances or combinations; but gradually and on the same base-line that our past operations have been conducted. We all know something about making and applying manures; we can readily learn all that is known every where the world over; the facts are few, the principles simple, and our experience and course of reflection have prepared us to comprehend and apply them to our own profit; while nature has been prodigal of the resources furnished us for the purpose. We have lime, marl, peat, muck, salt-marsh, pine-straw, oak leaves, and almost every variety of mineral and vegetable material for compost. All that is wanted is resolution to embark vigorously, and to the proper extent in the matter. Our farms will be our factories, our own slaves our operatives, *ourselves must be the managers*; no outlay or very little is requisite. If we are so foolish as to estimate the cost and profits of extensive manuring, by comparing it with past cotton planting, of course we will conclude that it would be ruinous; but compare it with present cotton planting, and it will be seen that every planter can profitably engage one fourth or more of his whole force in



making manure *at this time*; and the prospective advantages are still greater. Though no one else should do it, and no diminution of cotton ensue, still it is certain, that cotton must sooner or later run up and command a speculative price, every now and then, for a year or two at a time. The planter whose land has been enriched by manure, may then, if so disposed, exhaust it again and coin his deposit of compost into "*mint drops*." He will have lent labor worth but little, and got back in due season golden usury; while the value of his lands has been vastly enhanced, his whole scheme of management expanded and improved in every direction, and his happiness inestimably increased, in seeing every thing about him flourish luxuriantly—big stalks of cotton and big ears of corn, fat hogs and cattle, greasy faced smiling negroes, strong sound fences and substantial barns, stables and negro houses. All these things follow inevitably in the train of heavy manuring. Less actual money there may be for the moment, but more comfort, more satisfaction and brighter hopes. Here is the sure remedy for the error of exhausting our soil heretofore. It is also the only remedy. Slow, laborious, requiring infinite pains, but it is the *one way* and happily the *certain way*.

The evil of over-buying has an equally sure and fruit-bearing remedy. To shew that I am no enthusiast, I will say that I doubt very much whether we shall ever be able to make our own cloths, blankets, bagging, even our shoes, and most plantation implements, any more than we can our salt and iron, as cheap as we can buy them, even with cotton at five cents. It is true, that, according to locality, each one can do something at them; nearly all can furnish wool and hides to some extent, and make a great many little articles now foolishly purchased; while the whole may be made by persons who understand the business within the State. But our corn, meat, flour, rice, tobacco and butter, it is positively disgraceful for any cotton planter to continue to buy. There is no five miles square in the State that is settled, but has suitable soil for growing enough rice, tobacco and wheat for its own consumption at least, and on which machinery of some sort might not be erected to prepare them for use at a saving expense. As to that glorious grain Indian corn, it grows every where and is the best gift of Providence to man. The Athenians worshipped Pallas for bestowing the olive; but the olive, the vine, and the products of the bee combined, are not to be

compared to our maize. It is bread, drink and sweating. From the tassel to the root, fruit, leaf, stem and husk, all are of inestimable value; and no where can it be cultivated to greater perfection than with us. On sand or clay, swamp or mountain, it flourishes every where; and he is not a true man, who does not out of sheer gratitude grow it till every granary overflows, and every maw about him is ready to burst with it. And can it be said, that with such a resource, we cannot raise meat in abundance and to spare? From the first of June until frost, it may be soiled cheaper than clover, or than the best lands can be pastured. From thence to June again, it may be ground up alone or corn-cob and shuck together, or fed without preparation at all, the stalks and leaves also—all equally grateful to every animal, and the cheapest as well as best food in the world. The cultivation and the use of Indian corn is in its infancy. The time is approaching when those who can use it, will look with contempt upon every other grass in the world, and provide meat for most of those who are without the pale of its bounty. In the mean time, however, we can grow turnips, carrots, beets, artichokes, and that other invaluable root, sweet potatoes. With the help of these, we can rear every species of animal at as little cost and to as great perfection as can be done any where on earth. It is a great and injurious mistake to suppose, that because our ranges are becoming exhausted, and our climate forbids, as I believe it does, the grasses cultivated elsewhere, that this is not a stock-raising country. I am convinced it is equal to any other for that purpose. We are in a great measure exempt from the excessive heats, droughts, and wet spells further South and South-West, as well as their pestiferous insects. Our State is well watered throughout, and this single advantage over the lime-stone regions of the West so famous for stock, is enough to turn the scale in our favor; while there and further North, every thing is pinched with cold for eight months in the year, and for many of them the ground is covered deep with snow. Let the fact speak for itself. Who has failed that has attempted to raise animals here and taken the necessary pains? From the highest blooded cross of the Arabian and Barb, to the English Rabbit, every thing has been reared *to perfection*. It is only necessary to turn our attention seriously to it, and take the necessary trouble, to do it *cheaper*, than it can be done elsewhere.

The evil of over-buying is confined chiefly to articles for provisions, and I have shewn the remedy here. Like manuring, it is slow, laborious, and pains-taking; but as the two evils mentioned are intimately allied, so the two remedies suggested mutually act and re-act on one another. Manure makes corn—corn-stalks, stock—stock, manure. Let them be therefore, combined. It is idle (American humbug) reliance upon the magic of majorities, or the alchymy of transmuting, not metals only, but men, to talk of conventions to reduce the culture of cotton; or immigration to relieve the pressure of the times; or manufacturing to divert our labor. Let every man set about restoring his worn-out lands, and sacredly abstain from all bread and flesh not produced by himself, and a few short years will rejuvenate South-Carolina, and make every one of her sons rich in money—and what money cannot purchase, contentment.

We should never doubt the providence of God. The greatest blessings often come to us in the appearance of the greatest evils. In our entire devotions to mere cotton growing, we have neglected the rich resources bestowed upon us, and the culture of crops far more important to both our moral and physical well-being. The time has arrived when to do so longer, might be a lasting injury to us. Let us be grateful to Him, who through only temporary suffering recall us from our errors, and holds out to us such lavish rewards for doing right. For our own good, and for the welfare of our species, the agricultural capabilities of our State must be developed. With cotton at five cents, this will be more fully done in ten years, than it would be in as many centuries, perhaps, with cotton at ten cents. A wiser forecast than our own has ordained *our task*, and if we would imitate that wisdom we must address ourselves to its accomplishment.

HOLKHAM.

#### PROCEEDINGS OF THE BLACK OAK AGRICULTURAL SOCIETY.

At a regular meeting of the Society, held on the 6th of August last, Mr. T. W. Peyre, presented a statement of two experiments made in planting sweet potatoes, which are as follows:—

*Experiment 1st, as to distance. Half acre, rows 150 feet.*

7 rows planted 6 inches apart in the bed, made 7 $\frac{3}{4}$ Baskets.							
7	Do.	8	do.	do.	do.	8 $\frac{3}{4}$	"
7	Do.	10	do.	do.	do.	9 $\frac{3}{4}$	"
7	Do.	12	do.	do.	do.	9	"
7	Do.	14	do.	do.	do.	9	"



*Experiment 2d, as to the best mode of manuring potatoes.*

$\frac{1}{2}$ acre manured with 9 ox cart loads of stable manure under the list,	47 $\frac{3}{4}$	Baskets.
$\frac{1}{2}$ Do. do. 9 do. do. on the list,	51 $\frac{1}{2}$	"
$\frac{1}{2}$ Do. do. 12 do. do. on the list,	62 $\frac{1}{2}$	"
$\frac{1}{2}$ Do. do. 12 do. do. mixed with the list,	50 $\frac{1}{2}$	"
$\frac{1}{2}$ Do. do. 12 do. do. half under and half on list,	43 $\frac{3}{4}$	"

NOTE.—The whole of the last three half acres, were not measured, having been rooted by hogs; but parts of each, equal in amount to about 12 rows were selected, which were not rooted, and the half acre rated accordingly. The same basket, holding exactly one bushel, measured all the potatoes.

The following resolution offered by F. A. Porcher, was adopted.

"*Resolved*, That there shall be four Standing Committees added to those now in existence, to be called Committees of Inspection of Plantations. That one Committee shall be appointed for each of the following districts, viz: Cooper River; 2d Black Oak; 3d St. Stephens; 4th Upper St. John's. It shall be the duty of these Committees to visit and inspect the plantations of the members of the Society within their respective districts, and to report thereon at any subsequent meeting of the Society; also, that it shall be the duty of these Committees to ascertain the amount of cotton, rice, and corn, made in their several localities."

At an extra meeting, held on the 11th March last, the President presented the following communication from Mr. T. W. Porcher, giving the results of his experiments with marl.

"Three experiments with marl by Thomas W. Porcher, on long staple cotton, in the summer of 1844; in each experiment one hundred bushels per acre of marl was applied to *half* the land; marl dug at the Rocks plantation, and contains over 90 per cent. of carbonate of lime.

*Experiment No. 1.*

Two half acre lines, by ten half acres long, were selected in a field cleared fifteen years, and has been planted every year, in either cotton or root potatoes. The whole quantity, ten acres, were well manured with compost, planted at the same time, and worked at the same time, and in the same manner.

<i>Picked from 5 acres with marl.</i>				<i>Picked from 5 acres without marl.</i>			
August, -	-	-	345 lbs.	August, -	-	-	355 lbs.
September, -	-	-	1130 "	September, -	-	-	1000
October, -	-	-	180	October, -	-	-	175
November 7th, -	-	-	235	November 7th, -	-	-	205
			1890				1735
			1735				

A difference of 155 lbs. seed cotton in favor of the five acres with marl—equal to 31 lbs. seed cotton per acre.

*Experiment No. 2.*

In a field a mile from Experiment No. 1, and cleared in 1830, which has rested several different seasons, and one of these rest years being the year immediately preceding the present, (in which the experiment was made.) Seven acres were chosen, as in Experiment No. 1, the marl was applied on a half acre line contiguous to the one without marl, from which the cotton was gathered to test the difference.

<i>Cotton from 3½ acres with marl.</i>				<i>Cotton from 3½ acres without marl.</i>			
August, -	-	-	320 lbs.	August, -	-	-	310 lbs.
September, -	-	-	575	September, -	-	-	470
October, -	-	-	725	October, -	-	-	655
November 7th, -	-	-	275	November 7th, -	-	-	295
			<hr/>				<hr/>
			1895				1730
			1730				

A difference of 165 lbs. seed cotton from the 3½ acres of marled land, and equal to 47 1-7 lbs. seed cotton per acre.

### *Experiment No. 3.*

Was made in a field long planted, and exhausted by repeated crops of corn and summer pasturing, latterly only having had the benefit of being not cropt down when not in cultivation. The marl was spread over this field in summer of 1843, while in weeds, only four acres being left unmarled for experimenting. The cotton was gathered separately from these four acres of unmarled land, and from four acres (but not contiguous) of marled land. It is proper to state, that the natural quality of this last piece of ground was a little superior to that without marl, though as nearly equal as could be had in the field. The greater difference in this experiment over the two first, in favor of the marl, may be applied in part at least to its having been put on near a twelve month before planting, and the two first, only a few weeks.

<i>Cotton from 4 acres with marl.</i>				<i>Cotton from 4 acres without marl.</i>			
August, -	-	-	550 lbs.	August, -	-	-	385 lbs.
October, -	-	-	720	October, -	-	-	565
November 7th, -	-	-	175	November 6th, -	-	-	190
			<hr/>				<hr/>
			1445				1140
			1140				

A difference of 305 lbs. seed cotton in favor of the 4 acres with marl—equal to 76 1-7 lbs. seed cotton per acre.

NOTE.—Average production of Experiment No. 1, with marl,				378 lbs.
Do.	do.	do.	without marl,	347
			Difference, -	<hr/>
				31
Do.	do.	Experiment No. 2, with marl,		541
Do.	do.	do.	without marl,	494
			Difference, -	<hr/>
				47
Do.	do.	Experiment No. 3, with marl,		361½
Do.	do.	do.	without marl,	285
			Difference, -	<hr/>
				76½

On motion of William Cain, it was

*Resolved*, That the thanks of the Society be presented to Mr. T. W. Porcher, for the above communication, and that he be requested to continue to report the result of his experiments with marl, to the Society.

The Hon. W. B. Seabrook was then proposed as an honorary member of the Society, and unanimously elected, and the President was requested to communicate the fact to him.

At the anniversary meeting held on the 22d April last, the following gentlemen were elected officers for the ensuing year:—

SAMUEL DUBOSE, President.

ISAAC PORCHER, SEN., Vice-President.

H. W. RAVENEL, Secretary & Treasurer.

Mr. F. A. Porcher then delivered the anniversary Address.

On motion of Col. McKelvey,

*Resolved*, That a copy of Mr. Porcher's address be requested for publication.

Isaac Porcher, jr., from the Committee appointed at the last meeting, made the following report :

The Committee appointed to ascertain the number of acres marled within the territorial limits of the Society, report that 3134 acres have been marled, as follows:—

In Upper St. John's,	-	-	-	1147
In Middle St. John's,	-	-	-	814
Cooper River, Western Branch,	-	-	-	300
St. Stephen's,	-	-	-	363
St. James', Santee,	-	-	-	510
Total,	-	-	-	3134

Mr. Tuomey, the State Geological and Agricultural Surveyor, Dr. Meriweather, of Virginia, and Dr. R. W. Gibbes, of Columbia, were invited guests.

A letter from Mr. Ruffin, in answer to one from the President, containing resolutions of this Society, passed at the last anniversary, commendatory of his labors among us as Agricultural Surveyor of the State, was read. Also, two letters from the Hon. W. B. Seabrook, in response to an invitation from the Society to attend the anniversary meeting.

F. A. Porcher introduced the following resolutions, which were adopted :

*Resolved*, That a Committee be appointed to have completed, the analysis of our products lately begun by Professor Shepard, by having a destructive analysis made of the cow-pea and the blade of corn.

*Resolved*, That the Committee be instructed to have an analysis made of the cotton-stalk when in a state of rust, and at the same time to have a healthy plant analyzed, in order to ascertain thereby the cause of rust.

*Resolved*, That an analysis be made of soil, which habitually rusts cotton, and of three or four specimens of soil on which healthy cotton grows.

F. A. Porcher, Dr. M. Waring, and H. W. Ravenel, were appointed the Committee.

On motion of Dr. S. W. Barker,

*Resolved*, That the subscription for the ensuing year be reduced to \$3.



The Society then took a recess, to enable the Inspecting Committee to examine the articles offered for exhibition, and to make their report.

The Society being re-organized, W. M. Porcher from that Committee, made the following report :

The Committee on Premiums beg leave to report, that of the animals shewn them, they have awarded to Mr. W. M. Porcher the premium for the best Mule. Mr. Isaac Porcher showing one likewise.

To Mr. T. W. Peyre, they have awarded the premiums for the best Boar and Sow, half Berkshire and half Woburn.

To Mr. T. W. Peyre, the premium for the best Bull.

To Mr. S. G. Deveaux, was awarded the premium for the best specimen of Domestic cloth, all cotton; also for the best specimen of domestic cloth, half cotton and half wool.

To Mrs. Boineau, for the best specimen of home made Socks.

To Mr. P. M. Porcher, for the greatest amount of Corn made on 5 acres of land. (47½ bushels per acre.)

Mr. S. Clark shewed the Committee a Stallion, but the Committee have declined to award a premium.

All of which is reported by W. M. PORCHER, *Chairman*.

H. W. Ravenel was elected Orator for the next anniversary.

Mr. Tuomey at the request of the Society, exhibited an approved model of a Kiln for burning lime, and explained the mode of its construction and use.

The following Standing Committees have been appointed to serve for the ensuing year :—

*On Cotton*.—William Cain, Dr. Peter Palmer, A. J. Harvey, Dr. H. Ravenel.

*On Corn and the Provision Crops*.—Dr. M. Waring, S. G. Deveaux, Solomon Clark, John Harleston.

*On Manures*.—T. W. Porcher, Wm. Dubose, P. M. Porcher, Dr. Joseph Palmer, H. F. Porcher.

*Committee to award Premiums*.—W. Mazyck Porcher, William Dubose, Isaac Porcher, jr., Robert McKelvey, James Gaillard, Wm. Sinkler.

#### COMMITTEES OF INSPECTION OF PLANTATIONS.

*For Cooper River*.—Keating S. Ball, W. D. Gaillard, John S. White, James Poyas, Keating Simons.

*Black Oak*.—Isaac Porcher, jr., F. A. Porcher, T. W. Peyre, H. F. Porcher, P. M. Porcher.

*St. Stephen's*.—Charles B. Snowden, W. M. Porcher, D. Bonneau, S. W. Palmer, William Dubose.

*Upper St. John's*.—Dr. Peter P. Palmer, T. W. Porcher, Dr. Joseph Palmer, P. C. Kirk, William Sinkler, sen.

#### AGRICULTURAL SOCIETY OF PENDLETON.

*Report of the Committee on Farms, made to the Society on the 10th October, 1844.*

*Mr. Thomas M. Sloan's Farm*.—The Committee commenced their operations by visiting the farm of Mr. Thomas M. Sloan on the 16th September. This farm consists of about one hundred and thirty acres of low grounds, on the Seneca river, and as much, or a greater number of acres of good upland. It has always been

regarded as one of very great value, not only by reason of the great natural fertility, but also durability of its low grounds.

The Committee have not been able to decide upon its present, compared with its former productive powers; but judging from the evidences presented to them, by the heavy crop of corn and pea vine now upon the land, they are of opinion that the management of the proprietor has been at least such as to enable him to reap a rapid succession of abundant crops for the last twenty years, without materially impairing its value.

This, however, is only applicable to the low grounds; the upland fields have not fared so well. Either by reason of a too rapid succession of tillage crops, or by the total neglect of guard drains, or in all probability both, a portion of the upland fields have shared, to some extent, the fate so commonly attendant upon our agricultural operations, of being washed into gullies, and otherwise materially impoverished. The Committee were gratified to discover that Mr. Sloan has become fully awakened to the importance of the subject; has recently constructed several guard drains by way of experiment; and seems determined to extend them as far as may seem necessary to the safety of his upland fields. So far as his uplands are concerned, the proprietor has adopted a rotation consisting of a tillage crop and small grain alternately. On the low grounds, he informed us he was in the habit of cultivating two successive tillage crops, and every third year a crop of small grain. Mr. Sloan regards the pea crop as one of very great value. We found it co-extensive with his entire corn crop: and although large quantities are gathered annually as provender for stock, yet a still greater quantity must necessarily be returned to the soil, and to this, as a principal cause, the Committee are disposed to ascribe the durability of these low grounds, together with that of several other farms, similar in all respects to the one under consideration.

The crop on this farm was good throughout, and consisted of an equal number of acres of corn and cotton. The quantity to the hand, was fourteen acres, exclusive of small grain. The wheat crop was said to be good, and far beyond the quantity required for domestic consumption. The hogs were very fine, principally of the Berkshire breed. The cattle were not seen by the Committee.—The farm houses, consisting of stables, corn cribs, cow houses, &c., were very good, and the horses in good condition. The last object to which the attention of the Committee was directed, was an excellent Grist mill, a very superior Threshing machine, a Cotton gin, a Cutting machine, a Corn sheller, and a Corn crusher, all under one roof, and capable of being employed at the same time, or separately as desired. The Committee were much pleased with this extraordinary combination of mechanical and laboring operations. They regard this establishment not only as one of great convenience but of profit also.

In conclusion, the Committee, after all they have seen on this farm, have come to the conclusion, that Mr. Sloan is a successful

planter. And from the amount of old corn, and other evidences of abundance which every where met the eye, they have no doubt but that if famine should desolate our fair country in his day, he will be one of the last survivors.

*Mr. Robert A. Maxwell's Farm.*—This farm, like the preceding, is one of very great value, consisting of extensive low grounds, of remarkable fertility, and of a still larger amount of upland. The low lands were exclusively appropriated to the culture of corn, intermixed with peas, and the uplands to the cotton crop. The Committee have no data on which to base a calculation as to whether this farm has improved or degenerated. But from the acknowledgment of the proprietor, that his operations, especially on his low grounds, had not been governed by any regularly established rotation, the Committee are disposed to infer, notwithstanding the crop was highly superior throughout, that his efforts heretofore have been directed more towards the maintenance of its general productive powers, than to any great improvement of them. Necessity is a stern law, and one whose requisitions are most commonly complied with. But a habitual reliance upon resources that never fail, and never deceive us, is apt to lull the mind into a state of apathy, if not false security, which cannot fail to retard our progress in the prosecution of agricultural enterprises and improvements.

The Committee are firmly of the opinion, that after witnessing the low grounds, not only on Mr. Maxwell's farm, but also those on the other river farms which they have examined, and with a full knowledge of their great recuperative powers, that the adoption of a more lenient rotation, in connexion with other auxiliary means, would refresh and enrich the low grounds rapidly, and at the same time, increase the annual profits of the planter. The Committee were gratified to discover, that the proprietor, as if sensible of the importance of this policy, had under way an experiment with the red clover, covering an area of thirty acres, and intended in due time to be given to the land, which though unpromising, by reason of the extraordinary drought that had afflicted the country during the latter part of the season, may, nevertheless, under more favorable circumstances, prove a source of interest as well as profit to the owner.

The Committee were also informed by Mr. Maxwell of an experiment, the result of which when completed, he has promised to lay before the Society, that will no doubt prove a source of interest as well as of instruction, to all who are interested in the important business of reclaiming waste and worn out lands. This experiment was made upon a field thickly set with sedge grass, which was first turned in, and will be followed this fall with a crop of rye, to be also given to the land, with peas, to be in due time applied in the same way. The attention of the Committee was also drawn to an experiment at manuring a very exhausted piece of land with leaves spread upon the surface and ploughed in, with a spade full of swamp mud to each hill. The result when compared with a portion of the same field not thus managed, was said to be the difference between



an ear and a nubbin. But as Mr. Maxwell has furnished a reply to the interrogatories addressed to the several competitors, in which this experiment will be fully detailed, the Committee decline offering any further observations on the subject.

In the cultivation of the uplands upon this farm, which are exclusively appropriated to cotton, the proprietor has illustrated in a very satisfactory and convincing manner, the advantages of horizontal ploughing, or that near approach to it, which provides that each furrow shall convey away its own superabundance of water, and yet so gently as to leave the soil behind. This object has been fully accomplished by Mr. Maxwell, with the exception of a few points, throughout a cotton crop of more than one hundred acres. And although a considerable portion of these lands have been in cultivation for many years, and some of them consist of steep hill sides, yet no gullies were seen by the Committee, or other proof of material injury from washing away of the soil. In the business of guard drains, Mr. Maxwell has not yet embarked. But so thoroughly has he become convinced of their indispensable importance, that we have every reason to expect that by the next anniversary of our Society, through a combination of guard drains and intermediate horizontal culture, this farm will exhibit the most unquestionable proofs of refined agricultural operations. As to manuring on this farm, the quantity made, and the manner of making and applying it, the Committee beg leave to refer to the reply to the interrogatories.

The stock of horses exhibited to the Committee were of good quality, though not in fine condition, owing no doubt to the fact that the proprietor assigns a greater number of acres to each plough horse than is usually done. The cattle were very fine and of improved breed. The hogs were also highly superior, and generally of the Berkshire breed. And here the Committee beg leave to state a fact, which has a material bearing upon the important question, as to the relative merits of the Berkshire and the original stock of the country, (alias land pikes.) A lot of the common stock, some eight or ten in number, about equal in age, and reared under equally favorable circumstances, with a much larger lot of Berkshires, were closely observed by the Committee; the contrast was most disparaging to the native breed; they were not only much smaller, but evidently much less thrifty.

As to the agricultural implements on this farm, they were sufficiently numerous and of good quality, and the same merit was considered due to the negro and other farm houses, with but few exceptions.

*Hon. J. C. Calhoun's Farm.*—The Committee next proceeded to examine the farm of the Hon. John C. Calhoun, and although it may be truly said, that nature has done much for it, yet to its proprietor clearly belongs the merit of very superior management. Acting upon the theory, that lands possessing the greatest natural fertility, must ultimately become exhausted by a too rapid succession of tillage crops, without some adequate return; and from the destructive

effects of washing rains, Mr. Calhoun seems to have found a resource for the former, in the cultivation of the pea crop, and for the latter, in the application of guard drains to his upland fields, evidently equal to the necessities of his position in both respects.

The Committee are of opinion, that the evil of greatest magnitude, and the one which more than all others combined, tends to frustrate our agricultural operations, and impoverish our fields, is that which we suffer from heavy falls of rain, and the consequent washing of our lands. It is true, that tillage does its part, especially when unconnected with a rotation of crops, tending to give rest, and impart refreshment to the soil. But compared with the other mischief, it is as but the drop in the bucket. To this, as a principal cause, is to be ascribed the almost incalculable amount of worn out and waste lands, and yawning gullies, which disfigure and disgrace almost every farm that meets the eye throughout our country. It is this ruinous tendency, unchecked by a single contrivance, but as tamely submitted to, as if it were one of the irresistible decrees of destiny, which has led to the suicidal policy of abandoning fields as soon as their original fertility became exhausted, and felling the forest in search of the means of further subsistence; and finally, it is this which has caused so many thousands of our countrymen to exchange "their own their native land," with all its tender endearments, for the toils, privations and dangers of our western frontier.

Deeply impressed with the importance of this subject, the Committee were both gratified and instructed by the extraordinary management of Mr. Calhoun, by which, through the instrumentality of guard drains on all his upland fields, placed at such distances apart, and graded in such strict conformity to hydrostatic principles, that his upland fields, even those of the greatest declivity, have sustained almost as little injury from the heaviest falls of rain, as the rich low lands at their base. The Committee are aware, that such a statement is likely to be regarded as the offspring of that enthusiasm, in reference to agricultural enterprises and improvements, which well directed experiments too often prove to be fallacious. But regarding the farm of Mr. Calhoun as the first, if not the only one, in this section of our country, upon which this policy has been fully illustrated, and as furnishing proof approaching to mathematical certainty of the facts stated by the Committee, they have deemed it a duty incumbent on them, to bring to the notice of our planters, not only the principles upon which this measure has been conducted, but also the results which have followed.

Their attention was first directed to Fort Hill, a field of about forty acres, terminating at its base on the one side, in the low grounds, and connected with the uplands on the opposite side, by a depression considerably lower than its summit. This field, by reason of its descending in every direction, necessarily required to be literally belted with guard drains. Certain points appeared to have been selected, at which the water could be discharged with the greatest safety, and a series of drains were directed round the hill,

with a descent just sufficient to convey away the water, and yet so gently as not to enlarge or deepen their channels. The number of these drains was made to correspond with the necessities of the field, as determined by the amount of its declivity, being more numerous and nearer each other where the descent was greatest. The Committee were not informed as to the amount of this descent, or deviation from the horizontal line. But judging from the eye, they were supposed to equal from three to five feet in the hundred yards. As a further measure of precaution, the intermediate drill rows were run out horizontally, or nearly so: an arrangement which, by the aid of the first great measure of safety to the soil, seemed to have enabled each furrow to retain its own water, or to have parted with it so gradually as not to leave a trace of the slightest injury. The Committee did not learn how long this celebrated hill had been in cultivation, though appearances justify the conclusion that it must have been cleared thirty or forty years; yet, notwithstanding the soil was evidently good originally, judging from the very heavy crop of corn and pea-vine now upon the land, the Committee are induced to believe its productive powers have scarcely diminished.

In other hands, or even in the hands of the proprietor himself, had the above precautionary measures been omitted, the field must ere now exhibited in many places a series of gullies and abraded surfaces, and been destined soon to take rank with the waste and worn out lands of our country.

The remaining portion of the uplands on this farm, with the exception of various patches in the vicinity of the homestead, were appropriated to cotton. And although the greater part of them was fresh land, that had been but a few years in cultivation, yet, fully impressed with the importance of upland drains, and acting upon the policy that it were easier to prevent than remedy an evil, a sufficient number of them to protect the lands have been already made, with the same caution, and with the same success attendant upon those on Fort Hill. The amount of land required for these drains is very inconsiderable, and the amount of soil conveyed away through them, though comparatively small, may often be diverted, as we saw it done in several instances on Mr. Calhoun's farm, to some impoverished spot which would be improved, as to some wet depression which they would elevate and reclaim.

The low grounds on this farm were exclusively appropriated to the corn crop, intermixed with peas throughout. The corn crop was very fine, and the entire surface of the earth was covered with the most luxuriant crop of pea vine we ever witnessed. By reason of Mr. Calhoun's absence, the Committee are uninformed as to his management of the pea crop, nor do they know any thing concerning his rotation of crops. But all concur in the opinion, that a return annually to the soil, of the vast amount of pea-vine, on each acre of land, would amount to an adequate compensation for all that is taken from it by the corn crop.



The stock on this farm, consisting of horses, hogs and cattle, were of good blood and in fine condition. The farm houses were sufficiently numerous, and both comfortable and convenient. And this was more especially the case with the negro house, which consisted of a building of stone of superior masonry, two hundred and ten feet in length, divided into apartments, with separate fire-places, sufficiently large for all the purposes of comfort and healthful ventilation.

The Committee, in conclusion, have no hesitation in pronouncing the management upon this farm highly superior. The useful and the ornamental have been most happily blended, not only throughout the principal tillage crops of the farm, but also the more refined horticultural operations of the homestead.

*Mr. A. F. Lewis' Farm.*—The Committee next proceeded to examine the farm of Mr. Andrew F. Lewis; and in justice to this gentleman, and in advance of any remarks in reference to his agricultural operations, they regard it as their duty to state, that he is the youngest planter belonging to the list of competitors. But although he became the proprietor of a landed estate of very great value only three years since, he has, in that short period, given the most satisfactory proof that he possesses an amount of agricultural skill and enterprise, that entitles him to rank with our most experienced planters.

His farm, like the preceding, lies upon the Seneca river, and consists of nearly equal parts of low grounds and good upland. And although a considerable portion of the latter had been neglected for several years previous to his occupancy of them, and overrun with sage, noxious weeds and shrubs, yet the whole has been reclaimed during this short period, and a good crop of corn and pea-vine now occupies this hitherto unsightly waste.

In addition to the above improvement, the Committee consider Mr. Lewis entitled to much credit for an extensive and successful application of the spade to the drying of a portion of his low-grounds, heretofore too wet for cultivation.

The corn crop on this farm was confined principally to the low grounds. And although the pea crop was not co-extensive with the entire corn crop, yet they had been very judiciously cultivated with the corn on the uplands, where they were most needed as manure; and a portion of the low grounds exhibited them sown broad cast at the last ploughing, in a state of uncommon luxuriance.

The cotton crop, as on the preceding river farms, occupied the whole or nearly all of the upland fields. And here, again, the Committee had the pleasure of witnessing the salutary effects of guard drains, to a considerable extent. They were planned and executed in a way similar to those described on the farm of the Hon. John C. Calhoun, and with results both gratifying and successful.

The stock of hogs on this farm was of the most improved breed, and at least equal to any we have seen. The cattle were also very fine. As to the horses, they were not only very fine, but in superior condition. The Committee have no hesitation in awarding to Mr.

Lewis the credit of having surpassed all his competitors in this important branch of domestic economy.

The farm houses were uniformly comfortable and convenient, and the agricultural implements of good quality.

*Dr. O. R. Broyles' Farm.*—The farm of this gentleman was next examined. The proprietor has had possession of it only four years. At the time it came into his hands, it was regarded as an upland farm principally, though there was attached to it, of creek and branch low grounds very wet, and of equivocal value, probably one hundred acres.

The proprietor, acting under an impression long entertained by him, that the swamps and morasses of our district needed nothing but effective draining to make them not only very productive, but also very durable, has planned and executed the most extensive operations in ditching, and has succeeded in reclaiming, in a more effectual manner than has been done on any other farm known to the Committee, almost his entire low grounds, and has exhibited a crop of corn rising out of bogs heretofore impassable in many places, equal to the most productive low grounds on the Seneca river.

The operations of the proprietor on these low grounds, and their productiveness, believed to be the consequence of thorough draining, are well calculated to teach an instructive lesson concerning the value of the many thousands of acres of swamp lands in the upper districts of the State, and an equally valuable one as to the means necessary to bring them into cultivation.

The Committee were also pleasurably entertained by examining a crop of rice on this farm, of the most astonishing luxuriance, and judging from the appearance of the present crop, and from the amount reported from one acre on this farm by a Committee of the Agricultural Society last year, they entertain no doubt but that rice may be grown as successfully in this district, as in any portion of the southern States.

The crop of corn on this farm was equal, or nearly so, to that of the other competitors, and the cotton crop, though comparatively small, was generally good.

The farm houses, though new, and some of them unfinished, will be comfortable. The horses were in good condition, but the remaining portion of the stock, consisting of hogs and cattle, were not generally of improved breed, and decidedly inferior to the fine specimens exhibited on the other farms.

*Maj. R. F. Simpson's Farm.*—This farm is the only one examined by the Committee that is exclusively of upland. And although it contains large bodies of creek and branch bottoms of great fertility, as yet some ten or fifteen acres have been imperfectly dried, but which notwithstanding the unfavorable circumstances of the experiment, made quite a satisfactory yield.

This farm, when it came into the hands of the proprietor, some seven or eight years since, though once very fertile and productive, had been materially injured by the bad management of a succession

of overseers, whose known rule of operations is to make the greatest possible yield to the hand, without the slightest regard to the preservation of the land.

For this reason the proprietor found it to be his first duty, as it was his best policy, to set at once about the important business of repairing injuries imposed upon him by the improvidence of others. In pursuance of this policy, and stimulated by the necessities of his position, Major Simpson embarked at once in the business of guard drains, as a work of paramount importance; and has continued his operations in this respect until they occupy a position in every field on his farm. Under this management, a considerable portion of the old lands on this farm have improved, and promise ere long to be restored to their original fertility.

The corn crop on this farm was very good, considering the drought, which is commonly most injurious on upland. The cotton crop was also very good, and no doubts were entertained by the Committee, but that both corn and cotton crops had been well cultivated.

The negro and farm houses on this farm were sufficiently numerous and comfortable. The horses were in good condition. The hogs and cattle, though not generally an improved breed, were good specimens of the native stock.

*Col. John E. Calhoun's Farm.*—As the last of their official duties, the Committee proceeded to inspect the farm of Col. John E. Calhoun, consisting of an immense body of upland, and of several hundred acres of low grounds, at the confluence of the Keowee and Twelve Mile rivers. These lands possess, in the opinion of the Committee, a greater depth of soil, and higher productive powers, than any they have examined. And this, together with its superior improvements in buildings, of every kind, from the dwelling house down to the stables and farm houses, make this one of the most valuable farms in the upper country. Such being the advantages of Col. Calhoun, the Committee have been at a loss in assigning him his position, and defining his merits as a farmer, because it involved the necessity of discriminating between what was due to nature, and what to art.

A good crop, with most planters, is only looked for as a compensation of much toil, and preliminary preparation. But a good crop with Mr. Calhoun's advantages, is the almost certain consequence of simply planting the land, and cultivating it in the ordinary way.

The condition of this gentleman, (and the remark applies with nearly equal force to the other river planters,) is similar to that of an executive or judicial officer with a fat salary for life. The certainty of an annual stipend beyond the reach of contingencies, is apt to abate to some extent that zeal in the discharge of their official duties, so well secured under a different policy by the exercise of the elective franchise. It is true their lands are rich, and produce annually very abundant crops, but possessed as they are of the most



astonishing recuperative powers, and producing as they do, the so called clover of the south, with unsurpassed luxuriance, it is a matter of some astonishment to the Committee, that these low lands have not been improved, even beyond their present productive powers. It is a governing maxim with many to "be content with doing well;" but although it contains a moral of a highly conservative character, in reference to most of our operations, yet it is wholly inapplicable to agricultural enterprises. It is true, there may be a point beyond which the power of production cannot be extended, but that furnishes no excuse, even on the score of personal interest, why all due efforts should not be made, to reach as near that maximum point as possible, at least by means so cheap and available as those alluded to.

The crop both of corn and cotton on Col. Calhoun's farm was superior throughout, and had evidently been well cultivated.

In respect to guard drains, now so generally esteemed of indispensable importance, Col. Calhoun has not yet engaged. But in the business of horizontal or grade ploughing, he has displayed a management that has been most flatteringly signalized by success. He exhibited large fields of hilly land, which, though they had been long in cultivation showed but slight traces of those destructive evils attendant upon a neglect of this salutary precaution.

The Committee, as has been before observed, regard the farm houses, stables, and other out buildings on this farm, as decidedly superior to any they have witnessed. And the stock of hogs, horses and cattle, as far as seen by them of good quality, and with few exceptions in good condition.

In addition to the common farm horses, the Committee had the pleasure of examining Col. Calhoun's stock of blooded horses, which claim their genealogy from the most renowned champions of the Turf, both in England and the United States.

In conclusion, the Committee beg leave to state, that actuated by no motive but that of a zealous wish to do their duty, and to gain all the information in their power, in respect to the policy of our best planters, with the view of laying the same before our fellow-citizens, that it might become the common property, and thereby add to the general prosperity of the community at large; they have not only visited the farms of all the competitors, but have closely scrutinized their plans, practical operations, and general management, with but slight and unavoidable omissions. And after an attentive survey of the whole ground, we honestly believe that we live in the midst of an agricultural community, whose pretensions would not be disparaged by a contrast with any, even the most improved sections of the State. And although our present progress, compared with what it should be, is but as the dawn that precedes the meridian sun, yet unless the Committee have been completely deceived by the evidences before them, there is a spirit of improvement abroad in the land, owing in a great degree to the zeal and efficiency of the presiding officer of the Society, which, directed by



the lights that modern science has thrown upon our pathways, can not fail in due time to reclaim the declining fortunes of our country, and counteract the downward tendency of those destructive measures, which have so long disgraced our agricultural operations.

In approaching the last act assigned to the Committee by the Society, that of awarding certain specified premiums, to the proprietors of the first, second, and third best managed farms, the Committee beg leave to be discharged from the performance of that very delicate and responsibly duty. The reasons which have led them to this conclusion, are based upon the fact, that the claims of some three or four of the most prominent competitors, are so nearly balanced, that a discrimination in favor of either would be wholly gratuitous and inconclusive. And secondly, that notwithstanding the visiting Committee as appointed by the President, numbered six besides its Chairman, the services of only three have been made available in visiting all the farms. A circumstance which has thrown the responsibility of deciding this delicate question on a much smaller number than was intended.

The Committee as their last, but in no wise least duty, feel themselves called upon to express their unfeigned admiration of the superior management of those departments of the homestead proper, over which our kind hostesses, the farmers' wives, have undivided control. For although the farmers themselves have filled their barns, and granaries to repletion, and crowded their stock pens, with Durham cattle and Berkshire hogs, they have only furnished the raw material. And to their better halves belong the surpassing credit of those matchless culinary preparations, and horticultural operations, which have so amply compensated the toils of the Committee, and established for themselves the most undoubted claims to the credit of superior domestic management. All which is respectfully submitted to the consideration of the Society.

O. R. BROYLES,  
R. A. MAXWELL,  
THOS. M. SLOAN,  
ANDREW F. LEWIS,  
R. F. SIMPSON.

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#### THE SUB-SOIL PLOUGH.

In a late No. of the Farmer, a request is made, that a few acres for experiment should be cultivated with the sub-soil plough. I suppose an account of an experiment which has been made, will be equally satisfactory.

I have for some years past, made much use of the sub-soil plough. Last year I flushed a lot of fourteen acres, turning the sward well over, and following with a heavy roller. The corn was planted three and a half feet by four; when it came up, I run the sub-soil plough on each side, crossing with a rank cultivator. A short time before harvest, I threw a light furrow to the corn, and run down

the middle with the cultivator. This cultivation was induced by a strong growth of grass. I do not think the sub-soil plough can be used with safety when the corn is in an advanced state.

A cut and description of this plough may be found in the 6th vol. of the Farmer's Register, page 84, where it is called the Coulter Plough. I set two coulters in the same frame, six inches apart, and one six inches behind the other, to avoid choking. Under this arrangement, the plough requires the force of two horses, and if the corn rows be three and a half feet apart, twice in a row is sufficient, and it ought to be so geared that the horses run on one side of a row and the plough on the other. By this modification, the labor of a hand is saved, and the plough runs steadier than with a single coulters.

I do not recommend this cultivation for all kinds of soil; perhaps it would not suit in stiff tenacious clays—mine is friable, based on red clay.

Experience teaches, that when naked clay is exposed to the sun, it will produce no vegetation, and much injury has been done turning up a large quantity of clay, and mixing it with soil; when it is merely cut and loosened, I apprehend it imbibes moisture and affords support to plants in a season of drought.

Men of science tells us that there is a rapid circulation through all green plants, and that an inert substratum may impart no vegetative power; yet when the roots strike deep into it, perhaps its cooling effect, on the fluids, lessen the influence of a heavy drought. There was but little rain, in this region last year, in the months of July and August. The part of the crop where I had used the coulter plough suffered least.

I sow no wheat in corn grounds, and I think my fallows have been much benefited by being crossed with the coulter plough.

WM. CARMICHAEL.

Wye, Queen Ann's Co., Md. April 19, 1845.

[Am. Farmer.]

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#### THE BOMMER METHOD OF MAKING MANURE.

*Mr. Editor*—At the request of a friend, who entertains perhaps too favorable an opinion of my practical knowledge of planting, I send you, for publication, the following remarks on my experiment on the Bommer method of making manure. It was no part of my purpose at the outset, to publish any thing in relation to this process, which I knew was already in the hands of many who were every way more capable of performing this public service. This will account for, if not excuse, that want of precision in the results of the experiment, which could alone render it of the slightest importance to scientific agriculture. Where this precision is wanting, my individual opinion must go for what it is worth.

In the latter part of 1843, I purchased the patent Bommer method of making manure, and in January 1844, I put up a heap 30 by 40 feet, and 6 feet high, composed of leaves, straw, a large proportion

of which was of corn-stalks, which I watered for about six weeks, according to the printed directions which accompany the patent.— During this period, the weather was extremely cold and dry, which is considered the most unfavorable state of the atmosphere, for fermentation, or decomposition. On examination of the heap, I found the materials had very unequally decomposed; that the most solid matters, as the corn, and cotton-stalks, were but slightly decomposed, while the less solid, such as straw, leaves, &c., were rapidly rotting, though not thoroughly decomposed. Into the ley, with which the heap had been watered, I put four barrels of lime, thirty pounds saltpetre, and two two-horse-wagon loads of fresh stable manure.

About the first of March, one half of the heap was hauled out, on one part of a field of worn land, the other part of which I manured with lot and stable manure, and planted the whole field in corn.— The yield was I think, about double the usual crop; and the best judges that saw the field, pronounced that part manured by the Bommer manure decidedly the best. The other half of the heap was hauled out on part of a cotton field, otherwise unmanured. In the spring and first part of the summer, there were periods of protracted drought, and the product of manured lands, whether with cotton-seed, stable manure, or Bommer's manure, was not what might have been anticipated. But the decided superiority of the Bommer manure, imperfectly rotted as it was, over the stable manure, was so marked that the slightest observation could not fail to detect the difference in the size and vigor of the stalks and ears. Its effects upon the cotton was no less decided; and though I did not weigh the product, I feel assured that it was increased by the Bommer manure at least one hundred per cent. over the *unmanured* part of the field.

In February, 1844, I put up another heap; of the labor and time employed on which, I am enabled to give a more specific account.— I had fifteen hands and two wagons engaged in this work; the materials employed were pine leaves, straw, and corn-stalks, all in a dry state, much the largest portion being pine leaves. The site was cleared of trees and shrubs, by digging up their roots. The vat was excavated, and the grate constructed, and 500 wagon loads of material were put on, and all in readiness for watering in eight days.

This may give an idea of the labor necessary to putting up the first heap, though greatly exaggerated as to the time and labor to be bestowed on any subsequent heap—for full half the time and labor was consumed in clearing the trees, excavating the vat, and making the grate, which need nothing but slight repairs to keep them serviceable for years. On this last heap, I used ten barrels of lime, four loads ashes, forty pounds saltpetre, four bushels common salt, and about four loads of fresh stable manure. From this heap, I hauled on a cotton field about 300 wagon loads of as fine, rich, well rotted manure as I have ever seen, and have manured for the pre-



sent crop about thirty acres in drill, filling up the furrow with the manure. I have applied the ley to my garden vegetables, with the most happy effects. Under its application, beets and cabbage plants thrive beyond any thing in my former experience in gardening. It is, indeed, to this mixture, I ascribe the chief efficacy of the manure, and the absorption of the largest quantity of the compound is of the greatest importance to the fertilizing property of the manure. The frequent and thorough watering is therefore of indispensable necessity. Disappointment awaits the farmer who does not give this part of the process constant attention. To obviate as far as possible this laborious part of the process, I have used a common plank pump, of three inches bore, made by a common carpenter with a hose made of cotton or osnaburghs, which should be oiled or painted. With these appliances, three able-bodied hands watered the heap, after it was fully saturated, in three or four hours.

In conclusion, I have no hesitation in declaring my opinion, that a planter may manufacture as much of this manure in the year, as he can haul out in the next spring; that the labor and trouble of the method, when once fairly under way, is scarcely beyond what is incident to making manure of any other kind; that the expense is trifling, in comparison with the returns of the outlay; and I heartily and honestly recommend it to every farmer and planter, who wishes to increase the product of his fields, and render their improvement permanent.

Yours, &c. WILLIAM BYNE.

[*Southern Cultivator.*]

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#### RURAL ECONOMY OF THE SOUTH.

We make the following extracts from a letter of Mr. Thomas Affleck, to the editor of the Albany Cultivator, dated Washington, Mississippi, Nov. 16, 1844:

Bread, meat and clothing, every cotton plantation *should and can* furnish for its own consumption, and even for sale, and yet grow as much cotton as should be grown. In fact, there is not a doubt, but if such a system could be generally introduced, cotton would again command a remunerative price. Other items should be included—comforts instead of blankets; leather for shoes and harness; tobacco for the negroes; bagging made at home, of cotton; hay grown for stock and for sale; all the mules and horses needed, raised at home; a flock of sheep kept, sufficient not only to clothe the negroes, but to afford a considerable return for wool and mutton; butter made for sale, the butter-milk being decidedly more wholesome for the negroes young and old, than sweet milk, especially in summer, and any tidy old woman can easily make more in the dairy than in the field; and many other ways in which hands can be employed to at least *as great advantage and profit* as in the cotton crop—with the very great additional advantage of thereby lessening the ruinous over-production of that staple.



Clothing requires time and attention; but there is nothing else needed to enable any force of negroes to manufacture the materials for their own clothing, *with profit* to the owners. During winter the women cannot be so well employed in any way as in spinning up the wool, particularly when a carding machine is accessible. One woman, keeping a spinning machine and a loom going all the year, would spin the warp and weave the cloth for a very large place. These spinning machines are a great convenience—they spin six threads at a time—the gin-saws taking the cotton from the seed—the brush placing it on the cards when ginned, where it is carded, but then spun direct from the cards, all at one operation. Mine cost one hundred and thirty dollars. We have now in Natchez, a very excellent manufactory established, and now in the hands of a most energetic business man—Mr. M'Alister, of the firm of M'Alister & Watson—who is proving that such a concern will succeed in the South, afford a profit to the manufacturer, and be a great source of convenience and economy to the planter. Linsey, jeans, all kinds of cotton goods, including *bagging* and *sacking*, bale-rope and twine, &c. Also *burring* and carding wool at so much per pound. Mr. McA. began by pledging himself that he would manufacture for the planter, from his own cotton and wool, fabrics of any kind to cost him, at least, *no more* than he could buy it for of Northern manufacture, allowing a fair price for the raw material. The cotton bagging made for Mr. Isaac Dunbar, out of the most indifferent cotton, worth perhaps one or two cents per pound, is a very superior article—better, in the opinion of many, than the hemp article. I have very little doubt that the cotton shipped from Natchez will be, half of it, put up next year in cotton bagging—if the planters consult their own interest they will do so. If all the cotton in the Union was packed in this material, we would have the crop lessened or consumption increased rather, to the amount of 22,500,000 pounds, or 56,250 bales; being five yards of bagging, weighing nine pounds, for two and a half millions of bales. Bale-rope and twine would swell the amount to over 70,000 bales.

Mrs. A. is just finishing off a lot of over fifty double and single comforts for the negroes, in place of blankets, which cost an average of about \$1.12 each.

[S. W. Farmer.]

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#### LEARNING STEARS TO BACK.

The following appeared in the Maine Farmer, several years ago, with the signature of "A Teamster:"

"I have observed that very little attention is paid by our farmers to learn their steers to back; but as they become able to draw a load forward, they are often unmercifully beaten on the head and face, because they will not *back* as large a load, the drivers forget-

ting that much pains have been taken to learn them to draw well forward, but none to push backward. To remedy the occasion of this beating and trouble, as soon as I have learned my steers to be handy, as it is called, and to draw forward, I place them on a cart where the land is descending in a small degree. In this situation they will soon learn with ease to back it; then I place them on level land, and exercise them there; then I learn them to back a cart up land a little rising; the cart having no load in it thus far. When I have learned them to stand up to the tongue as they ought, and back an empty cart, I next either put a small weight in the cart, or take them where the land rises faster, which answers the same purpose. Thus in a few days they can be learned to back well, and know how to do it, which by a little use afterwards, they will never forget. This may appear of little consequence to some, but when it is remembered how frequently we want to back a load, and how commodious it often is to have cattle back well, why should we not learn them for the time when we want them thus to act. Besides, it saves the blows and vexation. I never consider a pair of oxen well broke until they will back with ease any reasonable load, and I would give a very considerable sum more for a yoke of oxen thus tutored, than for those that were not."

*Learning Oxen to pull together.*—Oxen sometimes contract a bad habit of pulling or hauling against each other; and sometimes crowd each other so as to render them almost entirely useless as laborers. It is said that by turning them out to feed in the yoke, they will learn to move in concert, and thus be broken of the habits of pulling and crowding.

If a yoke of oxen were fastened to a heavy loaded sled or drag, placed in a pasture, and the oxen secured in such a manner that they could not cast or injure themselves, and the load were so heavy that they must act in concert to move it, they would soon learn to pull together, and be true to the yoke. Having eaten the grass within reach of their first location, they would of necessity unite their efforts to remove their load to a fresh spot, and would adopt for their motto—*United, we feed; divided, we starve.* [Complete Farmer.]

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#### DIFFERENT QUALITIES OF HONEY.

Among all the treatises on the subject of bees that have come under my notice, I do not recollect one in which the different varieties and qualities of honey have been particularly noticed and described. It is a matter of surprise to me, as honey is obtained from so great a variety of flowers, possessing in themselves properties so various, that if there be any difference, there should not be as many kinds as there are plants producing it. But this does not seem to be the fact. In all that I have yet seen made at the North, I have been unable to discover but four distinct kinds; though some of them differ considerably in quality in different seasons.

*1st Quality.*—The first honey collected, and I think the richest and most valuable sort, is obtained in April and May, in this latitude, (42°) principally from the blossoms of fruit and forest trees. It is of an amber color, very heavy, being nearly of the consistence of tar, and possesses a peculiar flavor. The comb in which it is deposited is of a light straw color, and is thicker, that is, there is a greater proportion of wax than in the other kinds. It is collected in comparatively small quantities, or it is deposited in the lower apartments of the hive, so that but little of it ever gets to market in a pure virgin state. We once, however, had a globe containing nearly 20 pounds filled with it, taken of course, from one hive.

*2d Quality.*—The next variety to be noticed, is collected at the same season of the year as the first mentioned, and is deposited in the same kind of comb, has a similar though rather higher flavor, and is not only as thick, but nearly as black as tar; but it is obtained in still smaller quantities than the first.

*3d Quality.*—The next in order is taken in June and July. This is always of less specific gravity than the two former, though it differs more in this respect than any other kind, in different seasons. Sometimes it is so thin and watery as to ferment and become sour when it runs from the cells; and even in such cells as are uncapped. It is destitute of the rich flavor of the early made kinds, but looks better, being almost colorless, and is in thinner, whiter comb, and on account of its fine appearance, brings a better price in the market. It is the kind known as white-clover honey, and is doubtless principally obtained from that plant.

*4th Quality.*—The next and last to be described, is made later in the season, from buckwheat. Of this there is no doubt: the strong odor emitted from the hives, reveals the fact to a certainty, though there be none growing within the distance of a mile. The honey, however, loses this rank smell in a great degree, in a few weeks, and is then preferred by many to the white clover. Its color is a dark brown; but the comb containing it, is the whitest of all, and very thin. This variety is generally heavier than that from white clover, but less so than that from fruit trees.

The different kinds of honey are seldom if ever mixed at all in the cells; nor are the cells filled indiscriminately in the sheet; but each kind is by itself, so that a sheet of comb containing two sorts, can be divided with a knife so as to separate the two kinds.

In order to obtain all the varieties pure in boxes, the hives should be in good condition in early spring. They should not be much exhausted of honey, and well stocked with bees. In order to keep them in this condition, it is better to remove them to some warm out-building, or dry cellar, where they will not experience the great changes of temperature to which they are exposed, if left in the open air in winter. If well managed, the avails of the apiary are a profitable item of farm produce.

H. CARPENTER.

Poughkeepsie, Jan. 16, 1845.

[*Am. Agriculturist.*



## SIDE HILL DITCHING.

YALABUSHA, MARCH 24th, 1845.

To the Editors of the S. W. Farmer:

*Gentlemen*:—I have seen in your paper of the 7th inst., a communication from the "Farmer's Friend," Solon Robinson, Esq., in which he calls upon me to publish some information on "side-hill ditching." It is true I have been pursuing the system for several years, and I believe with very great benefit to my land, both hills and bottoms; though, the execution of the plan has been almost entirely under the direction of my son, P. Randolph Leigh, who, at my request, has furnished the annexed communication. If you think it of sufficient importance you may publish it in your *really valuable* paper.

Respectfully yours,

J. T. LEIGH.

*Dear Father*: In compliance with your request, the following views on hill-side or horizontal ploughing and ditching, are sub-joined.

A description of the instruments used, called a level and staff, will be necessary to enable persons to understand how the ditches are laid off. An upright staff,  $5\frac{1}{2}$  feet long,  $2\frac{1}{4}$  inches in diameter, with an iron spike on one end to stick in the ground; the other end a neck,  $1\frac{1}{4}$  inches in diameter,  $1\frac{1}{2}$  inches in length, bound with iron. The frame consists of an upperpiece, 36 inches long, 4 wide,  $\frac{5}{8}$  thick; a lower piece 22 inches long, 4 wide,  $\frac{5}{8}$  thick; a hole made through the upper-piece  $1\frac{1}{4}$  inches in diameter, to fit the neck of the upright staff, and through the lower piece  $2\frac{1}{4}$  inches, to fit the largest part of the staff; depth of the frame from outside to outside  $32\frac{1}{2}$  inches; width of braces  $4\frac{1}{2}$  inches; length according to the angle at which they are placed on the upper and lower pieces; dial for plumb line to hang on,  $3\frac{1}{2}$  inches wide, and 35 long; sight board 4 feet 10 inches long,  $3\frac{1}{2}$  inches wide,  $\frac{3}{4}$  inch thick; top of sight board same length, 3 inches wide,  $\frac{3}{4}$  thick; 15 inches from centre of sight board make a hole  $\frac{1}{4}$  inch in diameter.

To put the level together, lay the upper and lower pieces down on the edges,  $32\frac{1}{2}$  inches from outside to outside, let the braces in them and screw them on strongly, on the opposite side and in the middle of the frame so made, put on the dial board; nail the top on the sight board so as to form a thing resembling the side and bottom of a trough or gutter; place the sight board on the frame, the middle of it coming against the middle of the upper piece of the frame, and the top even with the top of the upper piece of the frame. Where the  $\frac{1}{4}$  inch hole in the sight board comes on the brace or side piece, make a hole in the side piece, and pin the sight board to it, loose enough to move up and down. The level is now completed with the exception of the scale to regulate the fall by. To make this, (there is a mathematical rule for doing it,) stick the upright staff firmly in the ground, place the frame on it by letting



the staff through the holes in the lower and upper pieces, and plumb the level; set a plank up ten feet from the end of the level nearest you, (the end of the sight board fastened to the frame should always be kept from you,) raise the sight board even with the top of the frame; let some one hold an object on the plank as high as the top of the sight board, which will be known by sighting at the object down the sight board until it comes in a direct line with the top of the board; then make a mark on the side piece next you at the bottom of the sight board, and make a hole through the side piece large enough to admit a pin of sufficient strength to bear the weight of the sight board; let the object on the plank be raised an inch, lower the sight board until it comes in a direct line with the object on the plank; make a mark and hold as above, which will indicate the fall to you. Raise the sight board and lower the object on the plank one inch below the place where it was when on a level; then bring the sight board in a line with the object as above, and that will give the fall from you of an inch in ten feet; these marks can be increased in the same way to any desired number. The sight staff: get a rod  $5\frac{1}{2}$  feet long, tie a piece of cotton, or any white substance that can be seen a distance, so that it can slip up and down, and the staff is made.

Where to begin, and how to make a ditch, are now to be considered. If there is any particular place you wish to carry the water to, that will be the place to commence. Set up and plumb the level; bring the sight board to the fall you wish to obtain; bring the object on the sight staff to the height of the level, and start some one up the hill with the sight staff; after he has gone 15 or 20 paces, he must stop and place the staff on the ground, the one at the level will then sight up the sight board to the object on the staff; if it is in a line with the sight board, place a stick for a marker where the staff stood; if it is not, move the staff up or down hill, as the case may be, placing the marker where the staff stood when the object was in a direct line with the sight board; the staff hand will then go on 15 or 20 paces more, and do as above directed; when the one carrying the staff gets too far for the one at the level to see clearly the object on it, move the level to the place where the last sight was taken to. In running this ditch the fall is of course to you.

If there is any place you wish to carry the water from, set the level at that place; raise the sight board so as to make the fall from you, and proceed as above. The best place generally to commence a ditch, is near the head of a hollow washed place, (as one of the objects in hill-side ditches is to stop washing—I say one, for there are others,) because at such a place the water is more apt to break over the bank than at any other, and by beginning at the wash, the best place for a ditch to cross can be chosen; whereas, when the ditch begins any where else, the level will indicate the place where the ditch must cross. But the principal advantage to be derived from beginning a ditch at the wash, is that the water coming down the hollow may be divided, by making the ditch fall both ways,

which should always be done where it is practicable, because it will prevent too great an accumulation of water at any one point on the ditch, and consequently prevent washing; the bank of the ditch will also be less liable to break, nor is it necessary that the ditch should be so wide as when the whole column of water comes down it. A ditch four hundred yards long that falls each way, it will require no more width or bank than one two hundred yards long, all falling the same way. I am aware that there are frequently many washes on a hill-side that one ditch should cross; in such cases each person must judge for himself where is the best place to begin. The ditch being staked off, take a two horse plough and commence at one end of the ditch so that the wing of the plow will be down hill; after running one furrow, slide the plough back and commence the second furrow at the same place so as to fill up the first one, and so on until the ditch is wide enough; four furrows in width will generally do; sometimes more are required, at other times less will answer. After the ditch is ploughed out let the hoe hands follow on, and pull the dirt out to the lower side, so as to form a continuous bank from one end to the other. Care should be taken not to make the ditch too deep, as a bank and not a ditch is the object. The level described is only perfectly correct when the ditch is straight; where a ditch is very meandering the level should be moved often. The number of ditches required on a hill, depends on circumstances; it is a very bad hill that will require more than two, and many will do with one. About the fall necessary to be given there are different opinions; but, if my experience on the subject is worth any thing, an inch and a half is the most that ought ever to be given in every ten feet; and I think that an inch is all-sufficient; but, there are good planters, far better than I am, who contend that on some land 2,  $2\frac{1}{2}$ , and even 3 inches fall is necessary. I cannot, however, agree with them, and nothing can be gained by arguing the matter. There is an error that all of us in this part of the country have fallen into, viz: the longer the ditch (the more water of course) the greater should be the fall; that is, the fall should increase to every ten feet the nearer you approach the end. Let us examine into that opinion: all know that water will run on a perfect level, because the depth of water is equal to that much fall, the greater the depth the greater the fall,—and, consequently, the greater the rapidity with which the water will run. Now, if the given fall increases with the volume of water there will be still a greater increase of velocity; too great velocity should be avoided, or a wash will be made; to prevent that the depth of the water should be diminished by widening the ditch as you approach the end, so as to let the water have a wider space to run over, and not by increasing the fall, which will create the very thing you wish to avoid—a gully.

If the system of horizontal ploughing and ditching is persevered in, (for it is yet comparatively in its infancy,) with the assistance of small grain, rest and grass, our hill land that is now so much injured will be reclaimed, and that yet to clear preserved.

There is an advantage in this system which the opponents of it cannot be aware of; it is this: that it is as much benefit to the low land in the vicinity of the hill, as it is to the hill itself, if not more, (and the land near the foot of the hill is the best we have in this section of the country,) because the ditches catch the water and carry it into the branches, (if ditched branches, for all branches should be ditched,) so as not to permit it to run down on the low land adjoining and drown it, which renders it unfit to plough until late in the spring, and a stand of cotton and corn is rarely obtained on it; the crop on it cannot be well cultivated during the early part of the cultivating season, which is the most important time. So, opponents of hill-side ditching, if you will not take dare of your hill-land, do save your bottoms; 'tis true that it does *directly protect* the high land, but *incidentally* the low. The objection that horizontal ploughing makes too many short rows, is frequently urged; but those who make that objection should remember (or know, if they do not,) that it also makes a great many long ones, and a good deal longer than can be obtained by running the rows straight in the same piece of ground. Of one thing there is no doubt, that more ploughing can be done on this system than by ploughing up and down hill; and it is much easier to the horse (mule of course always.)

There is an objection also urged against the horizontal system, which is a valid one: that it is difficult to keep the hands together whilst working the crop. This may be remedied in a very great measure if the following plan will be pursued: say for example that there are ten hoe hands, and that they commence working the field where the rows are short, the leader taking the first row; after working through the first row, the leader will, instead of taking the eleventh row as is usual, to "come back on," will take the twentieth, the next the nineteenth, and so on until the tenth hand takes the eleventh. By pursuing this plan, each hand, in two setts of rows, will do very near the same work. It is useless to say that negroes cannot work in this way—that there is too much counting for them—they can and do *do it*.

I have endeavored in the above to give fairly all of the disadvantages, and most of the advantages (or rather some of them) of horizontalizing, that I am aware of. All of the advantages are not given, because there is not an operation from the commencement to the ending of the working of the crop, that is not materially facilitated by it.

These views have already extended themselves over a greater space than could have been wished; but I do not see how I could be more concise, and at the same time be understood, (if I have even now succeeded,) for I am not accustomed to communicate my thoughts by writing. As ever,

RANDOLPH.

#### TO KILL CROWS.

Steep a quantity of corn in arsenic, and place it in different parts of the planted field. Crows and blackbirds will eat it with avidity, which soon causes their death.

[S. W. Farmer.]



## TANNING ON THE PLANTATION.

Tanning leather, for the use of the plantation, is an item of good management that should not be overlooked by any planter. Nor would it be as much overlooked as it is, if the simplicity of the process was generally known—that process I mean, that will suffice for making leather for home use. The *tanner* by profession, in order to prepare an article that will command a good price in market, and have a merchantable appearance, puts the hides and skins through a greater number of manipulations; and, that he may work to better advantage, has his arrangements on a more extensive scale.

The vats, tools, and implements really needed, are few and simple. Four *vats* will generally be found all-sufficient; one for a *pool* of fresh water, and for *baiting*; one for *liming*; another for *coloring*; and a fourth for *tanning*. The best size, in the clear, is seven feet long, four and a half feet wide, and five feet deep. They should be placed so as to be easily and conveniently filled with water from a spring, running stream or cistern. Dig the holes 9 feet by 6½ and 6; if the foundation is clay, the depth need not be over 5 feet. Form a stiff bed of *clay mortar* in the bottom, on which to lay the floor, and on it erect the sides and ends of the vat, of plank of almost any kind, sufficiently thick to resist the pressure from without—two inches will be thick enough. When this is done, and the whole nailed fast, fill in the vacant space round with *well-tempered* clay mortar, ramming it effectually: it is on this, and not the planks, that dependence is placed for rendering the vat perfect. When well made, a vat will be good for a long lifetime: the *ooze* preventing the decay of any but the top round of plank. Such a vat will hold 15 large beef hides (30 sides,) besides a number of small skins.

The material used for tanning, is the bark of the red or black oak, stripped when the sap flows in the spring, stacked and dried: of which, about four pounds are supposed to be necessary to produce one pound of leather. There is an article occasionally used, called "catechu," which is an extract made from the wood of a mimosa-tree, a native of India, half a pound of which answers the same purpose. Galls, willow bark, the bark of the Spanish chesnut and common elm, as also sumach, are all used by the tanner. It has been recently found that the root of the palmetto answers an equally good purpose with the best oak bark.

Bark has to be ground as wanted; or if the quantity needed is small, and it is not thought advisable to incur the expense of a *bark-mill* (from \$10 to \$18,) it may be pounded in a large mortar, or beat up on a block. It will require one third more of *pounded* than of *ground* bark, to afford equally strong *ooze*, which is the infusion of bark.

The principal tools requisite are a *fleshing-knife*, *currier's knife*, a *brush* like a stiff horse-brush, and a *fleshing-beam*. The *fleshing-beam* is made by splitting in two a hard-wood stick of about a foot in diameter; inserting two stout legs, some thirty inches long, in



one end of the split side, so that the other end rests on the ground, with the round side up, the elevated end being high enough to reach the workman's waist. A fleshing knife may be made by bending an old draw-knife to suit the *round* of the fleshing-beam.

The skins of bulls, oxen, cows and horses, are called *hides*; those of calves, deer, sheep, &c. are known as *skins*.

*Fresh* and *dried* hides receive the same treatment, except in the washing process. Those that are salted and dry (and no hide should be dried with less than from two to four quarts of salt being rubbed on the flesh side—dried without salt, it is extremely difficult to soften them,) require to be steeped, beaten and rubbed several times alternately, to bring them to a condition sufficiently soft for tanning.

Green or fresh hides must be soaked in pure water from 12 to 24 hours, to extract all the blood, &c., and soften the extraneous fleshy matter, which must then be removed; throwing one hide at a time on the fleshing-beam, *grain* or hair-side down, and scraping or shaving off with the fleshing-knife, which must be somewhat dull, or the skin is apt to be cut. They are then put in the *liming-vat*, which is supplied with strong lime-water, by filling the vat a little over half full of water, and adding thereto four bushels of unslaked (or of air-slaked) lime, or at the rate of two-thirds of a bushel of lime to the barrel of water. This will suffice for fifteen hides; each time that they are removed and a fresh lot of hides put in, add another bushel of lime, which will keep up the strength for a twelve month. Before using, stir the lime well up, and while it is thus mixed with the water, put in the hides evenly, so that the lime will settle on every part of them. They are to remain here from ten to fifteen days, or for three or four days after the hair will rub off with the finger completely and with ease. While in the liming-vat, they must be moved up and down every other morning, to expose them to the air, and to the equal action of the lime. Being now ready for unhairing, cut each hide in two, by slitting them along the centre of the back with a knife, forming them into *sides*. Throw ten or twelve of these sides on the fleshing beam, and strip the hair off with the knife; and as they are unhaired, throw each one into the vat of fresh water to bait or soak. When the lot of sides and skins in hand have been all unhaired and thoroughly washed, throw them again, and at once, on the fleshing-beam, with the *grain* or hair side up, and *wash them over* (rub and press them) with the knife until all the gummy or mucilaginous matter is worked out. This should be repeated two or three times during ten or twelve days, being each time baited anew in fresh water. And this *working over* must only be done when the sides feel soft and smooth to the touch; as they will at times, from some unexplained cause, feel rough, at which time they must not be *worked over*. While they are thus *baiting*, they must not be neglected, or they will soon spoil. Tanners are in the practice of adding 1000th part of sulphuric acid (oil of vitriol) to the last *bait*, which has the effect of swelling the pores and distending the fibres,

and thus rendering the skins more susceptible to the action of the ooze: forty-eight hours generally suffice for this last *baiting*.

In the meantime, some good strong ooze should be prepared for the first *tanning* process, called *coloring*. Fill a vat a little more than half full of water, and add bark, in the proportion of one and a half bushels of *ground*, or two bushels of *pounded* bark to the barrel of water, which will bring the vat up to about two thirds full. When the bark has soaked from four to five days, the sides are put in, and allowed to remain fifteen days; during which they must be *once* well and carefully *fleshed* and *worked over*, and must be drawn up and down every morning, for the first week at least, and the bark well *plunged* or stirred up, to have them *color* evenly.

After this, the vat being now two-thirds full of this same ooze, after drawing out the hides, lay a good coating of fresh bark, of say an inch thick, on the top of the water, on which it will float; lay on this a side, spread out evenly; and if it has to be lapped over in any part, lay on more bark until it is all well coated, taking care to place those at the bottom of the vat now that were at the top last time. On this side lay an inch coating of bark, and on that another side, and so on, with alternate layers of bark, until the vat is full, or the sides all laid away.

In this, which is called the *first bark*, the sides must lie four weeks. They are then drawn out, and the spent-bark, taken out with a *skimmer* or *drainer*. The sides are then replaced as before, with alternate layers of fresh bark in the same ooze, which has acquired some additional strength, notwithstanding the amount of tanning and extractive matter contained in the bark, that has become intimately combined with the animal fibre of the hide. In this *second bark* they remain six weeks undisturbed, when they receive a *third bark*, in the same way, in which they are left another six or eight weeks. Three *barks* will suffice to tan deer, hog, calf, and other small skins; four *barks* will make good sole leather, but five are preferable.

The *tanning* process being completed, *sole* leather is taken out of the vat, rinsed effectually, and dried in the shade, hanging the sides up by two of their corners to joists, where they remain until wanted. Those sides intended for upper and harness leather, (which are those of cows, &c., the largest and thickest bullock hides being used for sole leather,) as also deer, hog, and other small skins, being thoroughly rinsed, are spread out on a strong table, with the grain or hair side up, and scoured with a stiff brush, like a very stiff horse-brush, occasionally throwing on pure water, until *all the ooze* is scoured out. Tanners use the edge of the stone, made smooth, to assist in rubbing out the ooze, and all the water that can possibly be rubbed out. They also use what they call a *slicker*, being a dull edge of copper of about six or seven inches long, set in a piece of wood, to serve as a handle.

After they are all served thus, and rubbed as dry as possible, the table is cleaned off, and the skins thrown back upon it, *grain side* up,

and are rubbed with tanner's oil (cod-fish oil) as long as the leather will receive it. Harness leather must be completely saturated. As they are oiled, fold them up and lay them aside. When they are all gone over, lay one on the table at a time, flesh side up, and with a rag rub on all the *dubbing* that the leather will absorb. Thin hides require but a small quantity; harness leather must have a heavy coating.

*Dubbing*, which consists of equal parts of tar and tallow, melted together, and well mixed, must be made the day previous to being used. Lard *may* be used in place of tallow, but will require a lesser proportion of it. Each side of leather is then hung up by two corners to joints, there to remain until perfectly dry, or until wanted. If iron or steel touches a hide during the process of tanning, when in the least wet, or even moist, it will discolor it, forming an indelible black mark.

To *blacken* harness or other leather, take the skin when completely dried, and if any greasy spots appear, showing that more oil or dubbing has been applied than the leather could absorb, wet the spots with a little strong ooze, and scrub them out with a brush.— Then apply a good coat of *copperas*, (sulphate of iron) dissolved in ooze, until the leather has a good color all over. After this, when dry, put on another good coat of oil. The leather may then be smoothed off with a rounding edge of polished steel, or glass, or stone.

T. AFFLECK.

Ingleside, (Miss.) Sept. 19, 1843.

*Am. Agr.*

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From Tuomey's Report for 1844.

#### LIME BURNING IN SOUTH-CAROLINA.

The lime rock of the State, it was shown, extends over a continuous space of eight miles in York, having a thickness in some localities of 300 feet. It re-appears in Spartanburg, in three localities, and is seen again in Laurens.

There are five kilns in York, at two of which lime is burned for sale, at the rate of about six kilns each a year, or about 3000 bushels, and is sold at 18 cents a bushel. It is used principally for building.

Both Mr. W. Black and Dr. Nott, have made some satisfactory experiments with lime on their lands, and yet it was surprising to see the quantity of refuse lime and ashes that obstructed the way at some of the kilns. These kilns are about 10 or 12 feet in depth, contain 250 to 300 bushels, and 10 or 12 cords of wood are consumed in converting that quantity into lime. Of the eight lime kilns in this region, not one is properly constructed. Those at Pacolet iron works, and Garlington's, in Laurens, are the best. Yet, here the fire is placed on an open grate, the heat entering through an aperture of about 19 inches diameter. The fire place has no door, and consequently there is a column of cold air rushing in *over* the fire, and carrying off one half the heat. It is equally surprising that lime



should be produced at all, and that any one that had ever witnessed the effects produced on combustion, by closing the door of a stove, should ever have devised such a plan.

The quarrying is generally conducted with no greater skill than the burning. Knowing how the rock dips, the quarry should be opened to as great a depth as possible, on the back or upper side of the stratum, and as this is stratified, it might then be split in the direction of the dip, with far greater ease. But instead of this, the men commence wherever the rock is exposed, without reference to the manner in which it lies, and by main force, get off as much as possible. Now, there is the same difference between the two modes of quarrying that there is between cutting wood with and across the fibre.

*Modes of burning Lime.*—In some parts of Europe, it is customary to burn lime by piling up alternate layers of wood and lime stone, in larger fragments than usual, into conical piles, and then covering them with sods and earth, in the manner of common charcoal pits, and they are fired in the same way. This is of all modes the most simple, and cases may occur where it may be useful, as when land is cleared in the vicinity of lime stone. Next in simplicity to this, are those kilns consisting of a square hole dug on the edge of a bank, and tapering towards the bottom, where there is an aperture opening outwards. This sort of kiln may contain 300 or 400 bushels. The limestone and wood are laid in alternate layers, and fired through the opening.

For temporary purposes, these answer very well, but where the object is to furnish lime for sale, and at the lowest possible price, of course they are entirely inadequate.

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USES OF LIME.—(From the same.)

The following is a condensed view of the present state of our knowledge on the subject of lime, as presented in the writings of Ruffin, Liebig, Dana, Johnson, and others.

By burning lime, both the carting and spreading abroad, are greatly facilitated, as it is reduced in weight nearly one-half, and is readily converted into an impalpable powder. To produce the latter effect in the best manner, the lime should be allowed to slack slowly, and not by the addition of water. Where a compost is not made, perhaps the best mode will be, after determining the quantity to be applied, to cart it out in heaps at the proper distances, and to cover these heaps with the soil to the depth of a few inches, so as to protect it from the rain. In a few days it will be reduced to an impalpable powder. It may then be spread abroad, after mixing it with the soil which covered it.

It is not considered a good practice to mix lime with *fermenting* manures, as it decomposes the salts of ammonia, which are then

formed, and the ammonia passes off and is lost; unless, indeed, the heap be covered with some substance, such as clay or swamp mud, by which it may be absorbed.

The quantity of lime to be applied, will very much depend on the nature of the soil. Where the soil is acid, clayey, or wet, more may be applied than to a dry or sandy soil. Other things being equal, the quantity to be applied will very much depend upon the quantity of organic matter in the soil.

In England, 300 to 500 bushels to the acre are commonly applied, a quantity that with us, would be destructive. Doubtless, climate exercises much influence over the matter. From 30 to 50 bushels of *slacked* lime may be considered a good dose, and even ten bushels has a perceptible effect.

*Action of Lime.*—1. It combines with and neutralizes any free acid that may exist in the soil, and thus often converts noxious substances into fertilizing products, as when sulphuric acid is converted into sulphate of lime or gypsum. In a similar manner, it combines with and neutralizes the tannin which exists in peaty and swampy soils, and which prevents, by its antiseptic properties, the decay of vegetable matter.

2. It produces what would seem to be mechanical effects on the soil, rendering stiff clay land more light and porous, at the same time that it has an opposite effect on sandy and light soils. Its effects, however, are more certain on the former than the latter.

3. From its existence in all plants, it may safely be concluded, that it is absolutely necessary to their healthful growth.

4. It acts as a solvent in the same manner as other alkalies, rendering insoluble silicates soluble; hence its effects on clay. It accelerates the decomposition of woody fibre, such as straw, weeds, and dead roots, that remain in the soil, in a manner which, though not easily explained, is not the less certain. It combines with humus and other elements of decay, rendering them soluble in water, and consequently fitted for the food of plants.

There are many other effects evidently growing out of these, such as the eradication of weeds, and the increased value of the crops, in consequence of their improved quality.

A knowledge of the action of lime on vegetable matter, ought to prevent the mistakes committed in putting it in contact with the roots of plants, the delicate fibres of which it must attack, if there be not a superabundance of other vegetable matter in the soil. As lime acts chiefly by bringing into action ingredients that were inert in the soil, and as every crop carries off a certain quantity of soda, potash, phosphoric acid, &c., it follows that unless these be added, in the various forms of manures in which they exist, that a soil may be unproductive, although having lime in abundance. I now speak of lime, not marl, for in marling, many other substances are added, as well as lime.

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## HIDES AND STAVES.

New Orleans, April 8, 1845.

N. G. NORTH, Esq.

*Dear Sir:* I believe, as a general thing throughout Mississippi, planters rarely take any care of their beef, cow, and kip hides and calf skins, although they are cash articles, and in great demand in every market of the world, and forming no inconsiderable article of commerce. I would fain believe that this is attributable to a want of the proper knowledge of their management. In order, therefore, to induce planters to more care and economy in this respect, as they have no market at their doors for green hides, as is the case in the Northern States. I have obtained a few particulars from a hide merchant here, relative to the best mode of preparing and preserving them for a distant market—with prices, &c., and submit the same to you; which, if you deem worthy, can publish for the general good.

The different hides found in market are known as :

Flint, Dry Salted, and Green Salted Beef Hides.

Do. do. do. do. Cow do.

Do. do. do. do. Kip do.

Flint hides are made by stretching well on a board prepared for the purpose, and drying in the shade; then folded with the hair out. Dry salted are put in strong pickle for 24 hours to four days, then stretched as flint hides, and dried thoroughly in the sun. Dry salted cows and kips the same. Green salted must lay in strong pickle for a fortnight. Calf skins ought always to be well pickled.

In drying, care must be taken that the hides do not get wet, either by dew or rain. Flint hides are very liable to be damaged by worms. Whenever worms are discovered on them, they should immediately be well beaten. Hides thus prepared can be safely sent to any part of the world. Prices :

Flint,	7 $\frac{3}{4}$ a 8 $\frac{1}{4}$ c. per pound.
Dry salted,	7 $\frac{1}{2}$ a 8c. do.
Green salted,	4 a 4 $\frac{1}{4}$ c. do.
Cow do.	5 a 5 $\frac{1}{4}$ c. do.
Kip do.	5 a 5 $\frac{1}{2}$ c. do.

Dry salted Cow and Kip frequently command 7 a 8c.

The article of staves might be made profitable by those living and owning lands convenient to navigation. The dimensions and prices of the different kinds as given to me by a stave merchant, is as follows :

Pipe staves, 54 inches long, 1 inch thick, and 4 inches wide.	
Butt do. 39 do. 1 $\frac{1}{4}$ do. 4 to 5 in. do.	
Bbl. do. 33 do. 1 do. 3 to 4 in. do.	
Oil do. 50 do. 1 $\frac{1}{4}$ do. 4 to 5 in. do.	

All to be out of good white oak timber, clear of sap, nots, short crooks, and worm holes, and riven with the grain.



The rule for culling pipe staves is 3 inches wide, straight, and  $\frac{3}{4}$  inch thick when seasoned.

Staves are counted long count—that is, 1200 to the thousand.

Prices:

Pipe staves are worth \$25 to \$30 per thousand.

Butt do. do. 25 to 35 do.

Oil cask do. do. 30 to 35 do.

Barrel do. do. 8 to 12 do.

Hides and staves, as I before stated, are cash articles here, and at the prices specified. As the British government have, doubtless, relinquished the duties on these articles, they are the more likely to continue in request, and will, perhaps, command in future higher prices.

Yours truly,

J. A. RUFF.

[S. W. Farmer.]

#### ELDER JUICE TO CURE SKIPPERS IN BACON.

Skippers in bacon give much trouble to house wives in the country. It has been discovered by a female correspondent in the country, from whom we have received several useful communications, that skippers in bacon may be effectually and speedily destroyed by the use of *elder juice*, but the exact manner of preparing and applying it are not described.

Since writing the above, we have received the following more particular account from our esteemed correspondent.

Last year we lost at least one-third of our ham meat by the skippers, notwithstanding every attention, but never destroyed the skippers while the meat lasted. Our neighbors were, in this respect, as unfortunate as ourselves.

This spring, knowing that our meat had been well smoked, and the weather being dry, we neglected airing it as is customary, until our old enemy the skipper, returned, and had eaten it smartly. Sister, who attends to it, had it examined, scraped and sunned; no one can be more particular. In a week after, she had it examined, and found that there were in it nearly as many skippers as at first; you may suppose, after the loss we suffered last year, we were very anxious to destroy this troublesome insect. I had known for many years that elder juice would destroy *maggots*. If a hog, sheep, or any other animal gets wounded, and the flies get to the wound, they will create maggots; by washing the wound with elder juice, they will roll out by hundreds, if there be so many in it. I proposed therefore to try it on our bacon. The leaves were accordingly beat in a mortar, adding a little water: the flesh side of the meat was rubbed with the leaves thus bruised, and where small holes appeared, the juice was poured in. In three weeks after, the meat was re-examined, and the skippers utterly destroyed. The application here described, does not in the least degree communicate any bad

taste to the meat. I have little doubt that this, with many other simple applications within the reach of every housekeeper, might be applied to many other useful purposes if proper pains were taken to make the trial.

*American Farmer.*

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#### HEMP.

The cultivation of hemp has, till the last few years, been neglected in most of our States, except Kentucky; and vast quantities of this article required for American consumption, have been procured principally from Russia. The Russian hemp, like all other European commodities, was considered superior to our own, and consequently claimed a preference in our markets. But upon a proper examination, American hemp is found to equal the Russian article, when managed with proper care, and hence has within the last few years, received more encouragement than formerly. The consequence is, that its culture has extended into Illinois and Missouri, which States now supply the market with a very large portion. The following facts will exhibit the rapid increase in the hemp cultivation. In 1839, our importations of hemp amounted to \$607,776; in 1840, to \$686,777; in 1841, to \$609,202; in 1842, to \$267,849.—This presents a diminution in our imports which has been wholly supplied from home cultivation. But few entertained the opinion a few years since that American hemp would find a market in Europe at so early a day as the present; yet it is true that we are now shipping hemp to Western Europe. The receipts of hemp at New Orleans in 1841 and 1842 were 1,211 bales; in 1843 and 1844, they were 15,000, principally from Kentucky, Illinois and Missouri, the increase being principally from the latter two. Such encouragement should be afforded hemp-growers as will at any rate secure a sufficient supply for our own consumption, by giving our own article the preference. The western country would greatly diminish their expense of consumption, by commencing the manufacture of hemp goods, of which a very small portion are produced in this country, notwithstanding the vast consumption. *Nash. (Tenn.) Agri.*

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#### VINEGAR AT ONCE.

A correspondent of the New-York Farmer gives the following mode of making vinegar: Take a barrel with one head, and put sticks of wood crosswise on the bottom; then fill the barrel with hard wood shavings, laid light. Take rectified whiskey, and mix it with from four to six times its bulk of water. Let the bottom of the barrel be full of holes. Set it over a tub, and cause the mixture of whiskey and water to drip slowly upon the shavings till it is all passed through into the tub. On first putting up the concern, a small quantity of molasses should be mixed with the liquor. In passing through the great surface which the shavings afford, the oxygen of the air is brought in contact with the liquor, and thus changes it to vinegar.

## A CHEAP MODE OF OBTAINING LIME.

Ballast is brought by most of the vessels coming from other countries to Charleston. A large proportion of this is limestone, and is thrown out on the wharves, where it may be purchased at 50 cents per ton—if taken from the ship it would cost much less. This may be sent up the rivers, where wanted, in the empty boats and burnt where wood is cheapest, at the landings of all planters who need it, either for manuring or building.

## NANKIN COTTON.

Fifty-one bales of Nankin Cotton, raised by Andrew Kerr, of Tunica county, Mississippi, were sold in New Orleans on the 13th ultimo, by the house of Ralph King & Co., at 22½ cents per lb.

[This kind of cotton was once raised in Orangeburg District, in considerable quantities,—would it not be advisable to return to its culture again?—*Ed. So. Ag.*]

## THE WHEAT HARVEST,

Has already commenced in the neighborhood of Pomaria, owing to the extreme drought it will be very short, and in all probability the upper country will not make more than two thirds of the amount annually harvested.

*Columbia South-Carolinian, May 22.*

Communicated for the Southern Agriculturist.

## ST. LUKE'S AGRICULTURAL SOCIETY.

The Society held its fourth Anniversary at Bluffton, on Wednesday, the 14th May. The Society having been organized, proceeded to the election of officers—namely :

DR. JEREMIAH FICKLING, *President.*

THOMAS F. DRAYTON, *Vice President.*

GEORGE ALLEN, *Rec. Sec'y and Trea'r.*

GEORGE P. ELLIOTT, *Cor. Sec'y.*

The Committee on Premiums then made the following awards :

To Rev. Winborn A. Lawton, for the best experiment in Corn.

To Dr. J. W. Kirk, for the best Pen of Manure.

To W. R. Pritchard, for the best pair of Pigs. (Suffolk.)

To Dr. J. L. Pope, for the best Colt.

To the Rev. H. Blodget, for the best production of Vegetables.

To J. Stoddard, for the best display of Flowers.



There was no award for the experiments in Cotton, owing to some misunderstanding as to the quantity of acres required. There was a spirited competition for the premium on Hogs, and from the various fine specimens exhibited, it was evident that our pine-barren porkers would be compelled to give way to these improved foreigners. The vegetables exhibited were very superior; one of the Cabbages weighed eleven pounds, divested of the stalk and all superfluous leaves; and a Sugar Beet weighed as high as seventeen pounds; they were from Mr. Blodget's garden on Dawfusky.

Mr. Stoddard also exhibited from his garden on Dawfusky, a most splendid collection of rare and magnificent Flowers, which called forth universal admiration.

The Anniversary Address was delivered by the Rev. H. Blodget. The Society listened with great attention, as the author held a high position in our community, not only as a scientific, but as a *practically* successful Agriculturalist. The Rev. gentleman contended that man from necessity had become an agriculturalist; that previously to the expulsion from Eden, all the fruits of the earth were produced without labor; but after that period—man, from *want*, the greatest compulsive power in nature, was driven to cultivate the soil. The cultivation of the soil, he said, from its nature, compelled man to look to his Maker more than in any other occupation. He looked to Him to send the rain, the dew, the sun-shine, and the harvest. He looked to Him to withhold the tempest, the drought and the blight. The Speaker then called the attention of the Society to practical matters—made an onslaught on the *exclusive use* of the Carolina Cotton Hoe—designated it as an instrument of cruelty, and advanced the Plough and the Cultivator as superior upon our light soils, and maintained his position with energy and force. He concluded his very interesting address by recommending to the Society the turning in of the vine of the common Cow-pea, sown broadcast in the fall of the year, as a most simple and thorough renovator of exhausted soils. The Society, after the address, dined together, and without any concert or rule to that effect,—it was a cold water celebration, and as most of our members are young men, it speaks well for the future energy and *prosperity* of our young planters.

GEORGE P. ELLIOTT, *Cor. Sec'y.*

Bluffton, May 24, 1845.

### DISSOLUTION.

The undersigned have sold out their entire interest in the "Bommer Manure Method" to Mr. George Bommer, of N. Y; in consequence of which the partnership heretofore existing between us, was dissolved on the 6th ultimo by mutual consent.

Our agents are requested to make up their accounts to the 6th of November, and forward them to Tho. M. Abbett, Baltimore. who is solely authorised to settle.

For any transactions after that date they will account to Mr. Bommer.

TH. M. ABBETT,  
CHARLES BAER,  
JOHN GOULIART.

Baltimore, Dec. 14, 1844.

N.B.—Charles Baer is the General Agent for Mr. Bommer in Georgia, and John Gouliart his General Agent for the State of Maryland.

### BOMMER'S MANURE ME'THOD.

We have the satisfaction to announce to the Planters, Farmers and Gardeners of the vicinity of Charleston, that the Books with the Patent right, which Mr. Baer has caused to be sent on to the subscriber for disposal, have been received from Baltimore, and may be had of him on the terms before specified. Those who have bespoke them, will do well to call and obtain copies early. He also has received a report made to the Legislature of Maryland in favor of the method, which is daily gaining the public confidence whenever it is known. In the mean time we refer our readers to the last December and March Nos. of the Southern Agriculturist for some information on the subject.

A. E. MILLER,  
No. 4, Broad-street.



### PLOUGHS, &c.

The subscriber has constantly on hand, Ploughs of every description, embracing nearly all the patterns of Freeborn, Mayhu Davis, and those from the celebrated manufactory of Ruggles, Nourse and Mason. His prices range from \$3 to \$10, according to the size and quality. Where many are taken and paid for at the time, a deduction will be made on the usual prices. Also Cultivators, Corn and Cob Crushers at reduced prices; Mott's Agricultural Furnaces, and every implement required for the field or garden.

J. D. LEGARE,  
No. 81 East-Bay.

### RUFFIN'S CALCAREOUS MANURES \$1.

#### ELEMENTS OF AGRICULTURAL CHEMISTRY,

In a course of Lectures for the Board of Agriculture, delivered between 1802 and 1812. By Sir H. Davy.

#### WESTOVER MANUSCRIPTS,

Containing the history of the Dividing Line between Virginia and North-Carolina. By Wm. Bird of Westover.

THE BANK REFORMER. By Edmund Ruffin.

THEORY AND PRACTICE OF DRAINING AND EMBANKING. By John Johnston, Esq.

For sale at

A. E. MILLER'S, No 4 Broad-st.

## LIST OF PAYMENTS.

Mr. J. H. Hammond, Silverton,	1845	Mr. F. M. Weston, Georgetown,	1845
Mr. Wm. Brisbane,	1844	Rev. P. L. Wade, Georgia,	1845
Mr. C. Munnerlyn, Decatur, Geo.	1845		

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## TO OUR READERS.

The Number for June, contains some very sensible "*Suggestions for Southern Planters*," communicated by our steady friend "*Holkham*," which we recommend for their adoption.

The Proceedings of the *Black Oak Agricultural Society*, we insert with pleasure, and hope the spirit of experimenting will go on in every part of our State.

The Report of the Committee on Farms of the *Pendleton Agricultural Society*, we copy from the last Carolina Planter received; and recommend every farmer in the hilly country of the U. S. to adopt Mr. Calhoun's plan of ditching. There is another article on "*Side Hill Ditching*," by MR. LEIGH, from the South Western Farmer, which we recommend to the notice of our readers.

The article on making the Bommer Manure, is satisfactory to us, and we know it has been found highly beneficial in improving crops on worn-out lands.

There are several other articles which we recommend,—to-wit—*Tanning on plantations, Burning Lime and its uses, &c.*

The Proceedings of the St. Luke's Agricultural Society, came just in time to find a place on our last page.

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## TO OUR CORRESPONDENTS.

We have received a communication signed "*Alpha*," and also, and article on cultivating "*Oranges in Middle Florida*," which shall appear in our next.

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## MILLER & BROWNE,

## BOOK AND JOB PRINTERS,

At the old stand No. 4 Broad-street.

Will be thankful to their friends and the public for any work in their line.